

APPENDIX C: MONITORING PLAN

Action, effect, or resource	Method	Frequency of measure	Purpose	Responsible party
Biology				
Bald eagle winter roosts	Winter field review of likely winter roosts	Annually	To assess bald eagle presence and habitat	Wildlife biologist
Big game species	Determined by State agency	Determined by State agency	To determine presence and population trends of game species across the Black Hills	South Dakota Department of Game, Fish and Parks
Goshawk nests	Field visits to each known active or historical nest during nesting season	Annually	To determine presence of breeding goshawks	Wildlife biologist
Goshawk use of project area	Field surveys during nesting and fledging seasons	Annually	To find any new or unknown nests that may need protection during harvest operations	Wildlife biologist
Sensitive and management indicator bird species	Forest-wide field surveys	Annually	To determine presence and population trends of various bird species across the Forest	Forest wildlife biologist or monitoring coordinator
R2 Sensitive plant and plant Species of Interest known	Field surveys	1 st year (for immediate effects) and 5 th year (if	To assess effectiveness of avoidance mitigation. And to determine if any indirect effects	Botanist

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occurrences adjacent to stands proposed for management, prescribed fire units and new roads		botanist determined is needed to determine longer-term effects to particular occurrences) after timber harvest, prescribed burn, or road development	occurred as a result of project implementation	
Snags	Field surveys	Following timber harvest	To determine need for snag creation	Wildlife biologist and/or silviculturist
Soil and water				
Soil erosion on sale area roads	Contract inspections	During road construction and reconstruction, sale operations, and contracted post-sale activities	To determine whether road drainage structures are working as planned and road bed seeding has been accomplished in a timely manner, and to determine effectiveness of mitigation	Administrators of road contract, timber sale contract, post-sale activities in conjunction with a hydrologist
Log landing design and layout	Field approval of sites	Prior to development of landings	To avoid soil erosion and sediment transport	Timber sale contract administrator in conjunction with a hydrologist

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Timely erosion control on incomplete roads	Enforcement of contract provisions and BMPs	During road construction	To assess effectiveness of mitigation and determine need for additional erosion control	Administrators of road and timber sale contracts in conjunction with hydrologist.
Revegetation of disturbed areas	Inspect seeded areas	Growing season following seeding, after major runoff events	To assess effectiveness of seeding and seed mixture, and determine re-seeding or erosion control needs	Timber sale contract administrator, post-sale activity administrators in conjunction with a hydrologist
Status of road construction excavation and sidecast material	Enforcement of contract provisions and BMPs	Before and after road construction (to do effectiveness monitoring, before and after need to be completed)	To assess effectiveness of mitigation and determine need for additional erosion control	Road contract administrator
Stream condition	Stream channel monitoring sites	Before and after project implementation	To document the existing physical condition of the stream and monitor changes over time	Hydrologist

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Control of soil erosion on skid/forwarder trails, landings, and temporary roads	Cutting or payment unit inspections, final contract inspections	Duration of timber sale contract and post-sale operations	To identify areas needing erosion control and determine effectiveness of mitigation	Timber sale contract administrator, post-sale activity administrators in conjunction with a soil scientist or hydrologist
Noxious weeds				
Noxious weed prevention on roads, skid trails, and landings	Contract inspection and post-sale evaluation	1 through 5 years following harvest	To reduce new weed infestations and determine treatment needs, and determine effectiveness of mitigation	Timber sale contract administrator, weed specialist, and/or botanist
Noxious weed prevention on burned landings	Field inspection of landings	1 and 3 years following burn/seeding	To assess effectiveness of mitigation and determine need for treatment	Fire specialist, botanist, and/or weed specialist
Newly closed or decommissioned roads	Check for indications of road closure violations, damage to closures	Ongoing after closure or decommissioning	To determine effectiveness of road closure/decommissioning methods and show where more work is needed	Travel management specialist, wildlife biologist

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Fire and fuels				
Fuel loading	Site visit	Following prescribed burns	To determine post-burn fuel loading and effectiveness of burn	Fuel specialist
Rehabilitation of fire control lines	Field inspection of fire control lines	1 and 3 years following fire line rehabilitation	To assess effectiveness of rehabilitation and determine need for further treatment	Prescribed burn specialist, botanist, weed specialist
Timber sale				
Scenery management	Field review of visually sensitive harvest and road work areas	During and after timber harvest	To ensure scenic integrity objectives are met and assess effectiveness of mitigation	Landscape architect
Conifer regeneration in openings	Regeneration surveys	1, 3 and 5 years following harvest	To assess stocking and need for site preparation or planting	Silviculturist
Timber sale layout	Office and field review of layout	Following layout, prior to bid offering	To evaluate sale implementation and assumptions used in planning	Planning team, timber sale prep forester
Timber sale implementation	Office and field review of completed timber sale	Following timber sale closure	To evaluate sale implementation and assumptions used in planning and effectiveness of mitigation	Planning team, administrators of timber sale and road contracts

